

A30 FRIDAY, MAY 19, 1989



WILLIAM H. WEBSTER  
... China "promoting" missile exports

## Signs Indicate India Building An H-Bomb

WEBSTER, From A29

sion." It subsequently halted this program, but there have been numerous reports in recent years of its renewal.

A thermonuclear explosion, which involves the fusion of atom nuclei, is many times more powerful than an atomic blast caused by the splitting of an atom, or nuclear fission.

Webster expressed considerable concern about the failure of the international community to take action to stop India and Pakistan from engaging in a rivalry that he said "has all the earmarks of a [nuclear arms] race."

"Yet, there have been no real efforts in the international community to try to head off that race," he said, adding that it is "a cause for international concern" about the stability of Southeast Asia.

Pakistan is regarded as a "de facto" nuclear power as well and, like India, has been developing and testing indigenously built ballistic missiles. However, Pakistan is generally viewed as far behind India in both its nuclear weapon and missile capabilities.

But Webster said the CIA is "particularly concerned about the growing missile race" between those na-

## Signs Found India Building An H-Bomb

*W. Germany Shipped  
Beryllium, CIA Says*

By David B. Ottaway  
Washington Post Staff Writer

Director of Central Intelligence William H. Webster said yesterday there are "indicators" that India is building a hydrogen bomb and he warned of a nuclear arms race between India and neighboring Pakistan.

Testifying before a Senate panel, Webster confirmed that West Germany had sent India a shipment of American beryllium, a lightweight metallic element, without first obtaining required U.S. permission for its re-export.

Webster said the Central Intelligence Agency looked for "indicators" of a country's interest in obtaining a thermonuclear bomb and that beryllium is "usually used in enhancing fission reaction."

"There are other indicators that tell us India is interested in thermonuclear weapons capability," he added.

In a subsequent exchange with Sen. John Glenn (D-Ohio), chairman of the Senate Committee on Governmental Affairs, Webster confirmed that among the "other indicators" were activities at India's Bhabha Atomic Research Center north of Bombay involving purification of lithium, used to produce tritium needed in thermonuclear explosions, and the separation of lithium isotopes.

Webster said Glenn's information is "basically correct" and that it was "just another indicator" of India's interest in developing a thermonuclear capability.

An Indian Embassy spokesman, R.R. Dayakara, dismissed such reports as "baseless." He said his government's longstanding position is that "We are committed to peaceful uses of nuclear energy."

Glenn noted that it was 15 years ago yesterday that India first detonated an atomic device, which it called a "peaceful nuclear explosion."

See WEBSTER, A30, Col. 1

Leonard S. Spector, assistant  
negotiation, said the indicators that  
Peace, said the indicators that  
Glenn and Webster had discussed,  
when taken in connection with In-  
dia's new ballistic missile, the Agni,  
are "like a smoking gun" in pointing  
to India's intentions to become a  
nuclear power.

The Agni, which is expected to  
make its first test flight between  
Sunday and Wednesday, has a po-  
tential range of 1,500 miles with a  
one-ton payload.

Webster disclosed yesterday that  
India's chief missile architect,  
A.P.J. Abdul Kalam, was trained in  
the United States at the Wallops Is-  
land, Va., rocket center. "This sci-  
entist returned to India. And with  
the knowledge gained from his  
work on civilian space programs,  
Dr. Kalam became the chief design-  
er of India's Prithvi and Agni bal-  
listic missiles," he said.

Kalam is director of the Defense  
Research and Development Labo-  
ratory at Hyderabad, according to  
embassy spokesman Dayakara.

Glenn disclosed, and Webster  
confirmed, that the West German  
economic office had authorized the  
re-export of the beryllium to India  
without obtaining the required U.S.  
authorization. A Glenn aide said the  
United States had shipped 95 kilo-  
grams of beryllium to West Ger-  
many in 1984.

Webster also testified that Brazil  
had an agreement 10 years ago  
for nuclear cooperation with Iraq,  
and some Israeli and U.S. intelli-  
gence officials report is engaged in a  
nuclear weapons program.  
The agreement, which expires in  
1990, unless renewed, provided  
Brazil to supply Iraq with low-en-  
riched uranium, equipment and con-  
struction services for building nucle-  
ar reactors, security for them, train-  
ing of Iraqi personnel and an ex-  
change of visits to research centers.  
Webster refused to discuss the  
details of Iraq's program. But Reg-  
inald Bartholomew, undersecretary  
for security assistance, said  
Iraq program is "not very ad-  
vanced," adding "Iraq does not ap-  
pear to be at a stage to assemble a  
weapon any time soon."

The CIA director also reported.  
North Korea is making its own  
short-range Scud-B surface-to-sur-  
face missiles, which it used to ob-  
tain from the Soviet Union. Iran and  
China have based missile designs of  
their own on the Scud.

China is "actively promoting" the  
export of shorter-range ballistic  
missiles for "a mix of financial and  
political objectives." It was not clear  
whether this violates repeated  
Chinese pledges that China will  
show "prudence" and "caution" in  
missiles trade following Wash-  
ington's complaints about the sale  
of CSS2 missiles, with a 1,600  
mile range, to Saudi Arabia.

## New 'Star Wars' Chief: The Right Man for the Job—at the Right Time

By JOHN M. BRODER, *Times Staff Writer*

WASHINGTON—The "Star Wars" antimissile program has come down to earth and nowhere is that more evident than in the low-key character of the man who now runs it, Air Force Lt. Gen. George L. Monahan.

Earlier this year, Monahan replaced Lt. Gen. James A. Abrahamson, a "Star Wars" zealot and missionary who sold—some say oversold—the program as a talisman against nuclear holocaust.

Monahan, by contrast, modestly describes himself as merely a "program manager" who says that his job is not to be a promoter for "Star Wars" but to run a "sanity check" on the costly and controversial program.

"I ought to be skeptical," the three-star general said Friday in his first interview with reporters. "I've got to be sure we're right."

Monahan assumes control of the "Star Wars" program—formally known as the Strategic Defense Initiative—at a time when it is undergoing radical changes.

Former President Ronald Reagan envisioned "Star Wars" as an impenetrable shield consisting of futuristic weapons that would va-

porize Soviet ballistic missiles as they rose from silos and submarines. Over the years, as questions about the cost and technology of such a system overwhelmed it, new ideas emerged for a far more limited program that would place partial defenses on the ground and in space in stages.

The latest twist is a concept called "Brilliant Pebbles," swarms of little rockets permanently stationed in space, ready to respond to orders to track and destroy enemy missiles in flight.

On Friday, Monahan admitted that he had reservations about the Brilliant Pebbles program, saying that it is still "in the very early stages." Added the general: "I wonder about its feasibility."

He also demonstrated a sense of humor rarely found in the Pentagon's basement SDI complex when he said that if the Brilliant Pebbles idea fails, "Star Wars" will probably move on to "Genius Gravel."

Monahan expressed doubts about the constellation of satellites to provide launch warning and communications between interceptor rockets. The 18 Space Surveillance and Tracking Satellites would provide "fat juicy targets" for Soviet

anti-satellite weapons, Monahan said.

"We have a dependency here that I'm not real wild about," Monahan said of the surveillance satellites. "That plus the cost."

Abrahamson, ever the promoter, seldom let such doubts creep into his speech. In an "end-of-tour" memo written as he left SDI in March, Abrahamson heartily endorsed Brilliant Pebbles and offered a variety of suggestions for broadening the "Star Wars" program and increasing its visibility.

Abrahamson's ideas fell on deaf ears in the Pentagon, which is facing a tightly constrained budget and where the generals and admirals have never been enthusiastic about what most of them believe is a pie-in-the-sky vision draining needed billions from real-world programs.

Defense Secretary Dick Cheney, in one of his first public appearances after taking over the Pentagon, said he believes that "Star Wars" was "oversold" in the Reagan Administration. He has proposed a \$1-billion cut in its budget for the fiscal year beginning Oct. 1 and is planning to slash its five-year spending by 20%, to \$33 billion from \$41 billion.

Monahan, 58, said Friday that

the direction of the program over the next several years will be guided by several cost and technical feasibility studies to be conducted this summer. He declined to predict where the program would go if Brilliant Pebbles and other promising new technologies prove unworkable or unaffordable.

Monahan is a highly decorated former fighter pilot with more than 4,000 hours of flying time and 122 combat missions in Vietnam. After service in Southeast Asia, he served in a variety of posts with emphasis on weapons procurement and program management.

He was promoted to lieutenant general in July, 1986, and is due to retire next year after 35 years on active duty.

His impending retirement clearly colors his approach to the job. He said that while "Star Wars" is "more in the spotlight, more in the fishbowl" than other military programs, his job as manager is not very different from what it was when he worked on other systems.

He does not have a lifetime invested in space weapons, Monahan said, and he is not pinning hopes of winning a fourth star on his performance at SDI. "To me, it doesn't make that much difference."

### FIRE...from Pg. 9

capacity of the computers and reduce reliability, so the brass is telling designers that pilots may not need the ultimate cockpit automation. "We don't have people smart enough to understand how to control technology in a design sense," says Randolph, who started a software literacy program.

Perhaps most important, officers such as Randolph are taking a more skeptical view of the future. The political rush to build highly automated weapons before they are completely developed is yielding to caution. No longer will the blue-skies techno-jockeys who design the flashiest electronic black boxes automatically get a favorable hearing. Nor should they.

### ELECTRONIC COMBAT REPORT

MAY 12, 1989

Pg. 1

#### CHU BELIEVED SEEKING TO TERMINATE ATARS TACTICAL RECONNAISSANCE PROGRAM

Industry sources are reporting this week that Office of the Secretary of Defense director of program analysis and evaluation (PA&E) David Chu has drawn up a Program Budget Decision (PBD) that would cancel the Air Force's Advanced Tactical Airborne Reconnaissance System (ATARS). The sources say Chu feels that manned reconnaissance missions should be done away with and that the price tag for ATARS -- DOD will spend \$1.3-billion over the FY-90-94 five-year defense plan -- is too high. The sources also say the PBD has been given to officials in the offices of the assistant secretary of defense for command, control, communications and intelligence (C3I) and the director of defense research and engineering (DDR&E).

The industry sources say Chu is proposing to fill the ATARS role with current F-4 reconnaissance planes and unmanned air vehicles (UAVs) for "hot" environments. ATARS is to be integrated onto the new Medium-Range UAV (see separate story). In addition, Chu feels the future employment of KH satellites will provide DOD with worldwide reconnaissance coverage, the sources say.

The role of reconnaissance for the Air Force is the subject of a recently completed Rand Corp. study done at the behest of Chu's office, the industry sources say. The report says that nearly every Air Force reconnaissance mission can be accomplished through the use of UAVs. The Air Force is now engaged in its own study of reconnaissance, the sources say. ATARS is a digital, near-real-time reconnaissance system giving battlefield commanders target information within minutes of being gathered. —Thomas Duffy

### DEFENSE & FOREIGN AFFAIRS WEEKLY

MAY 15, 1989

Pg. 1

## Pakistan Perfects N-Detonator, China Helps

Sources close to the Pakistani nuclear program have revealed that Pakistani scientists have now perfected detonation mechanisms for a nuclear device. Islamabad has successfully produced bomb casings which can withstand the buffeting of high speed flights. Such a device, it is learned, can be delivered by Pakistan's F-16s. It has been further learned that China is making arrangements for a Pakistan nuclear test, most likely at its Lop Nur testing ground. Over the past two years Pakistani scientists have been producing enriched uranium at the Kahuta plant. Pakistan's success has been made possible to a large degree by China. Informed sources have told the *Weekly* that China continues to help Islamabad in its nuclear ambitions. Chinese scientists have been visiting Kahuta and Pakistani scientists have been reciprocating the visits.

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CONTROLS

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BODY

TAGS: KNPP, MNUC, PREL, PARM, PK

SUBJECT: PRESS ARTICLE ON PAK NUCLEAR ENRICHMENT PROGRAM

1. SUMMARY: A MAY 16 ARTICLE IN THE LAHORE DAILY "THE NATION" ANNOUNCES THAT BREAKTHROUGHS IN ENRICHMENT TECHNOLOGY HAVE MADE IT POSSIBLE FOR PAKISTAN TO CONDUCT A NUCLEAR EXPLOSION AT ANY TIME. SUCCESSFUL EXPERIMENTS, HOWEVER, HAVE MADE SUCH TESTING UNNECESSARY. THE ARTICLE ALLEGES THAT PAKISTAN CAN PRODUCE FIVE TO SIX NUCLEAR BOMBS FROM 70-80 KGS OF ENRICHED URANIUM. END SUMMARY.

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2. A FRONT-PAGE ARTICLE IN THE MAY 16 EDITION OF THE ENGLISH-LANGUAGE DAILY "THE NATION," CLEARLY BACKGROUNDED BY OFFICIAL (PROBABLY PAEC) SOURCES, CLAIMS THAT PAKISTAN HAS DEVELOPED A "LIQUID" SYSTEM FOR ENRICHING URANIUM (AS OPPOSED TO THE "GASEOUS" SYSTEM USED BY OTHER COUNTRIES). THE UNNAMED INNOVATOR OF THIS "UNIQUE AND CHEAPEST" METHOD OF ENRICHING URANIUM HAS APPLIED FOR A PATENT FROM THE U.S. DEPARTMENT OF COMMERCE. THE ARTICLE MAKES CLEAR THE PROCESS WAS NOT RPT NOT DEVELOPED BY DR. ABDUL QADEER KHAN, WHOSE WORK, THE ARTICLE SAYS, WAS FOCUSED ON THE IMPLEMENTATION OF THE OTHER SCIENTIST'S BREAKTHROUGHS, AND WAS NOT BASED ON A.Q. KHAN'S "RESEARCH" IN THE NETHERLANDS (I.E., HIS THEFT OF THE PLANS OF THE URENCO ENRICHMENT PROCESS).

3. THE ARTICLE QUOTES "COMPETENT SCIENTISTS AND NUCLEAR PHYSICISTS" AS SAYING THAT, BECAUSE OF ITS BREAKTHROUGHS IN ENRICHMENT TECHNOLOGY, "PAKISTAN CAN GO ANYTIME FOR A NUCLEAR EXPLOSION", BUT IT WILL NOT DO SO BECAUSE THE PRIME OBJECTIVE OF THE GOVERNMENT OF PAKISTAN IS TO DEVELOP THE MEANS OF USING NUCLEAR ENERGY PEACEFULLY." THE SCIENTISTS ADDED THAT "PAKISTAN IS NOT REQUIRED TO GO FOR ANY EXPLOSION OF AVERAGE MAGNITUDE (SIC)", AS THE SUCCESSFUL EXPERIMENTS PROVE POSITIVELY THAT THERE IS NO SUCH NEED FOR DOING SO."

4. THE ARTICLE ALSO STATES THAT "PAKISTAN CAN PRODUCE ABOUT FIVE TO SIX NUCLEAR BOMBS WITH AROUND 70 TO 80 KGS OF ENRICHED URANIUM." THE SOURCES FURTHER STATE THAT THE COST OF ENRICHING SUCH AN AMOUNT OF U-235 IS "LESS THAN 20 MILLION PAK RUPEES" (I.E., LESS THAN USD ONE MILLION). WHILE OTHER COUNTRIES HAVE SPENT BILLIONS OF DOLLARS ON DEVELOPING CONVENTIONAL METHODS OF ENRICHING URANIUM, PAKISTAN IS "FAR AHEAD OF ANY OTHER COUNTRY" IN THIS FIELD. THE ARTICLE'S SOURCES ARE QUOTED AS SAYING, "THE WEAPON-GRADE ENRICHMENT IS A GIFT OF THE ALMIGHTY."

5. FINALLY, THE ARTICLE POINTS OUT THAT, WHILE THE KAHUTA ENRICHMENT PLANT WAS THE SOURCE OF U-235 FOR PAKISTAN'S NUCLEAR PROGRAM, THE KARACHI NUCLEAR POWER PLANT (KANUPP) WAS THE MAIN SOURCE OF PLUTONIUM-239. "PAKISTAN," THE ARTICLE'S SOURCES ARE QUOTED AS SAYING, "BADLY NEEDS A REPROCESSING PLANT WHICH WILL SUPPLEMENT THE BYPRODUCTS OF KANUPP AND HELP PRODUCE MORE POWER, BESIDES GETTING FUEL FOR OTHER NEEDS."

JONES

ADMIN

END OF MESSAGE

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